

## SUBCHAPTER E—PLANNING AND RESEARCH

### PART 420—PLANNING AND RESEARCH PROGRAM ADMINISTRATION

### Subpart A—Administration of FHWA Planning and Research Funds

#### Subpart A—Administration of FHWA Planning and Research Funds

Sec.

- 420.101 What is the purpose of this part?
- 420.103 How does the FHWA define the terms used in this part?
- 420.105 What is the FHWA's policy on use of FHWA planning and research funds?
- 420.107 What is the minimum required expenditure of State planning and research funds for research development and technology transfer?
- 420.109 What are the requirements for distribution of metropolitan planning funds?
- 420.111 What are the documentation requirements for use of FHWA planning and research funds?
- 420.113 What costs are eligible?
- 420.115 What are the FHWA approval and authorization requirements?
- 420.117 What are the program monitoring and reporting requirements?
- 420.119 What are the fiscal requirements?
- 420.121 What other requirements apply to the administration of FHWA planning and research funds?

#### Subpart B—Research, Development, and Technology Transfer Program Management

- 420.201 What is the purpose of this subpart?
- 420.203 How does the FHWA define the terms used in this subpart?
- 420.205 What is the FHWA's policy for research, development, and technology transfer funding?
- 420.207 What are the requirements for research, development, and technology transfer work programs?
- 420.209 What are the conditions for approval?

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#### §420.101 What is the purpose of this part?

This part prescribes the Federal Highway Administration (FHWA) policies and procedures for the administration of activities undertaken by State departments of transportation (State DOTs) and their subrecipients, including metropolitan planning organizations (MPOs), with FHWA planning and research funds. Subpart A identifies the administrative requirements that apply to use of FHWA planning and research funds both for planning and for research, development, and technology transfer (RD&T) activities. Subpart B describes the policies and procedures that relate to the approval and authorization of RD&T work programs. The requirements in this part supplement those in 49 CFR part 18, Uniform Administrative Requirements for Grants and Cooperative Agreements to State and Local Governments and 49 CFR part 19, Uniform Administrative Requirements for Grants and Cooperative Agreements with Institutions of Higher Education, Hospitals and Other Non-Profit Organizations.

#### §420.103 How does the FHWA define the terms used in this part?

Unless otherwise specified in this part, the definitions in 23 U.S.C. 101(a) are applicable to this part. As used in this part:

*FHWA planning and research funds* include:

- (1) State planning and research (SPR) funds (the two percent set aside of funds apportioned or allocated to a State DOT for activities authorized under 23 U.S.C. 505);
- (2) Metropolitan planning (PL) funds (the one percent of funds authorized under 23 U.S.C. 104(f) to carry out the provisions of 23 U.S.C. 134);
- (3) National highway system (NHS) funds authorized under 23 U.S.C. 104(b)(1) used for transportation planning in accordance with 23 U.S.C. 134

and 135, highway research and planning in accordance with 23 U.S.C. 505, highway-related technology transfer activities, or development and establishment of management systems under 23 U.S.C. 303;

(4) Surface transportation program (STP) funds authorized under 23 U.S.C. 104(b)(3) used for highway and transit research and development and technology transfer programs, surface transportation planning programs, or development and establishment of management systems under 23 U.S.C. 303; and

(5) Minimum guarantee (MG) funds authorized under 23 U.S.C. 505 used for transportation planning and research, development and technology transfer activities that are eligible under title 23, U.S.C.

*Grant agreement* means a legal instrument reflecting a relationship between an awarding agency and a recipient or subrecipient when the principal purpose of the relationship is to transfer a thing of value to the recipient or subrecipient to carry out a public purpose of support or stimulation authorized by a law instead of acquiring (by purchase, lease, or barter) property or services for the direct benefit or use of the awarding agency.

*Metropolitan planning area* means the geographic area in which the metropolitan transportation planning process required by 23 U.S.C. 134 and 49 U.S.C. 5303-5305 must be carried out.

*Metropolitan planning organization (MPO)* means the forum for cooperative transportation decisionmaking for a metropolitan planning area.

*National Cooperative Highway Research Program (NCHRP)* means the cooperative RD&T program directed toward solving problems of national or regional significance identified by State DOTs and the FHWA, and administered by the Transportation Research Board, National Academy of Sciences.

*Procurement contract* means a legal instrument reflecting a relationship between an awarding agency and a recipient or subrecipient when the principal purpose of the instrument is to acquire (by purchase, lease, or barter) property or services for the direct benefit or use of the awarding agency.

*State Department of Transportation (State DOT)* means that department, commission, board, or official of any State charged by its laws with the responsibility for highway construction.

*Transportation management area (TMA)* means an urbanized area with a population over 200,000 (as determined by the latest decennial census) and designated by the Secretary of Transportation or other area when TMA designation is requested by the Governor and the MPO (or affected local officials), and officially designated by the Secretary of Transportation.

*Transportation pooled fund study* means a planning, research, development, or technology transfer activity administered by the FHWA, a lead State DOT, or other organization that is supported by two or more participants and that addresses an issue of significant or widespread interest related to highway, public, or intermodal transportation. A transportation pooled fund study is intended to address a new area or provide information that will complement or advance previous investigations of the subject matter.

*Work program* means a periodic statement of proposed work, covering no less than one year, and estimated costs that documents eligible activities to be undertaken by State DOTs and/or their subrecipients with FHWA planning and research funds.

**§ 420.105 What is the FHWA's policy on use of FHWA planning and research funds?**

(a) If the FHWA determines that planning activities of national significance, identified in paragraph (b) of this section, and the requirements of 23 U.S.C. 134, 135, 303, and 505 are being adequately addressed, the FHWA will allow State DOTs and MPOs:

(1) Maximum possible flexibility in the use of FHWA planning and research funds to meet highway and local public transportation planning and RD&T needs at the national, State, and local levels while ensuring legal use of such funds and avoiding unnecessary duplication of efforts; and

(2) To determine which eligible planning and RD&T activities they desire

to support with FHWA planning and research funds and at what funding level.

(b) The State DOTs must provide data that support the FHWA's responsibilities to the Congress and to the public. These data include, but are not limited to, information required for: preparing proposed legislation and reports to the Congress; evaluating the extent, performance, condition, and use of the Nation's transportation systems; analyzing existing and proposed Federal-aid funding methods and levels and the assignment of user cost responsibility; maintaining a critical information base on fuel availability, use, and revenues generated; and calculating apportionment factors.

(c) The policy in paragraph (a) of this section does not remove the FHWA's responsibility and authority to determine which activities are eligible for funding. Activities proposed to be funded with FHWA planning and research funds by the State DOTs and their sub-recipients shall be documented and submitted for FHWA approval and authorization as prescribed in §§ 420.111 and 420.113. (The information collection requirements in paragraph (b) of § 420.105 have been approved by the Office of Management and Budget (OMB) under control numbers 2125–0028 and 2125–0032.)

**§ 420.107 What is the minimum required expenditure of State planning and research funds for research development and technology transfer?**

(a) A State DOT must expend no less than 25 percent of its annual SPR funds on RD&T activities relating to highway, public transportation, and intermodal transportation systems in accordance with the provisions of 23 U.S.C. 505(b), unless a State DOT certifies, and the FHWA accepts the State DOT's certification, that total expenditures by the State DOT during the fiscal year for transportation planning under 23 U.S.C. 134 and 135 will exceed 75 percent of the amount apportioned for the fiscal year.

(b) Prior to submitting a request for an exception to the 25 percent requirement, the State DOT must ensure that:

(1) The additional planning activities are essential, and there are no other reasonable options available for fund-

ing these planning activities (including the use of NHS, STP, MG, or FTA State planning and research funds (49 U.S.C. 5313(b)) or by deferment of lower priority planning activities);

(2) The planning activities have a higher priority than RD&T activities in the overall needs of the State DOT for a given fiscal year; and

(3) The total level of effort by the State DOT in RD&T (using both Federal and State funds) is adequate.

(c) If the State DOT chooses to pursue an exception, it must send the request, along with supporting justification, to the FHWA Division Administrator for action by the FHWA Associate Administrator for Research, Development, and Technology. The Associate Administrator's decision will be based upon the following considerations:

(1) Whether the State DOT has a process for identifying RD&T needs and for implementing a viable RD&T program.

(2) Whether the State DOT is contributing to cooperative RD&T programs or activities, such as the National Cooperative Highway Research Program, the Transportation Research Board, and transportation pooled fund studies.

(3) Whether the State DOT is using SPR funds for technology transfer and for transit or intermodal research and development to help meet the 25 percent minimum requirement.

(4) Whether the State DOT can demonstrate that it will meet the requirement or substantially increase its RD&T expenditures over a multi-year period, if an exception is granted for the fiscal year.

(5) Whether Federal funds needed for planning exceed the 75 percent limit for the fiscal year and whether any unused planning funds are available from previous fiscal years.

(d) If the FHWA Associate Administrator for Research, Development, and Technology approves the State DOT's request for an exception, the exception is valid only for that fiscal year's funds. A new request must be submitted and approved for subsequent fiscal year funds.

**§ 420.109 What are the requirements for distribution of metropolitan planning funds?**

(a) The State DOTs shall make all PL funds authorized by 23 U.S.C. 104(f) available to the MPOs in accordance with a formula developed by the State DOT, in consultation with the MPOs, and approved by the FHWA Division Administrator. The formula may allow for a portion of the PL funds to be used by the State DOT, or other agency agreed to by the State DOT and the MPOs, for activities that benefit all MPOs in the State, but State DOTs shall not use any PL funds for grant or subgrant administration. The formula may also provide for a portion of the funds to be made available for discretionary grants to MPOs to supplement their annual amount received under the distribution formula.

(b) In developing the formula for distributing PL funds, the State DOT shall consider population, status of planning, attainment of air quality standards, metropolitan area transportation needs, and other factors necessary to provide for an appropriate distribution of funds to carry out the requirements of 23 U.S.C. 134 and other applicable requirements of Federal law.

(c) The State DOTs shall inform the MPOs and the FHWA Division Office of the amounts allocated to each MPO as soon as possible after PL funds have been apportioned by the FHWA to the State DOTs.

(d) If the State DOT, in a State receiving the minimum apportionment of PL funds under the provisions of 23 U.S.C. 104(f)(2), determines that the share of funds to be allocated to any MPO results in the MPO receiving more funds than necessary to carry out the provisions of 23 U.S.C. 134, the State DOT may, after considering the views of the affected MPO(s) and with the approval of the FHWA Division Administrator, use those funds for transportation planning outside of metropolitan planning areas.

(e) In accordance with the provisions of 23 U.S.C. 134(n), any PL funds not needed for carrying out the metropolitan planning provisions of 23 U.S.C. 134 in any State may be made available by the MPO(s) to the State DOT for funding statewide planning activities under

23 U.S.C. 135, subject to approval by the FHWA Division Administrator.

(f) Any State PL fund distribution formula that does not meet the requirements of paragraphs (a) and (b) of this section shall be brought into conformance with those requirements before distribution on any new apportionment of PL funds.

**§ 420.111 What are the documentation requirements for use of FHWA planning and research funds?**

(a) Proposed use of FHWA planning and research funds must be documented by the State DOTs and sub-recipients in a work program, or other document that describes the work to be accomplished, that is acceptable to the FHWA Division Administrator. Statewide, metropolitan, other transportation planning activities, and transportation RD&T activities may be documented in separate programs, paired in various combinations, or brought together as a single work program. The expenditure of PL funds for transportation planning outside of metropolitan planning areas under § 420.109(d) may be included in the work program for statewide transportation planning activities or in a separate work program submitted by the State DOT.

(b)(1) A work program(s) for transportation planning activities must include a description of work to be accomplished and cost estimates by activity or task. In addition, each work program must include a summary that shows:

- (i) Federal share by type of fund;
- (ii) Matching rate by type of fund;
- (iii) State and/or local matching share; and
- (iv) Other State or local funds.

(2) Additional information on metropolitan planning area work programs is contained in 23 CFR part 450. Additional information on RD&T work program content and format is contained in subpart B of this part.

(c) In areas not designated as TMAs, a simplified statement of work that describes who will perform the work and the work that will be accomplished using Federal funds may be used in lieu of a MPO program. If a simplified statement of work is used, it may be

## § 420.113

submitted separately or as part of the Statewide planning work program.

(d) The State DOTs that use separate Federal-aid projects in accordance with paragraph (a) of this section must submit an overall summary that identifies the amounts and sources of FHWA planning and research funds available, matching funds, and the amounts budgeted for each activity (e.g., statewide planning, RD&T, each metropolitan area, contributions to NCHRP and transportation pooled fund studies, etc.).

(e) The State DOTs and MPOs also are encouraged to include cost estimates for transportation planning, research, development, and technology transfer related activities funded with other Federal or State and/or local funds; particularly for producing the FHWA-required data specified in paragraph (b) of § 420.105, for planning for other transportation modes, and for air quality planning activities in areas designated as non-attainment for transportation-related pollutants in their work programs. The MPOs in TMAs must include such information in their work programs. (The information collection requirements in §§ 420.111 have been approved by the OMB and assigned control numbers 2125-0039 for States and 2132-0529 for MPOs.)

### § 420.113 What costs are eligible?

(a) Costs will be eligible for FHWA participation provided that the costs:

(1) Are for work performed for activities eligible under the section of title 23, U.S.C., applicable to the class of funds used for the activities;

(2) Are verifiable from the State DOT's or the subrecipient's records;

(3) Are necessary and reasonable for proper and efficient accomplishment of project objectives and meet the other criteria for allowable costs in the applicable cost principles cited in 49 CFR 18.22;

(4) Are included in the approved budget, or amendment thereto; and

(5) Were not incurred prior to FHWA authorization.

(b) Indirect costs of State DOTs and their subrecipients are allowable if supported by a cost allocation plan and indirect cost proposal prepared, sub-

## 23 CFR Ch. I (4-1-21 Edition)

mitted (if required), and approved by the cognizant or oversight agency in accordance with the OMB requirements applicable to the State DOT or subrecipient specified in 49 CFR 18.22(b).

### § 420.115 What are the FHWA approval and authorization requirements?

(a) The State DOT and its subrecipients must obtain approval and authorization to proceed prior to beginning work on activities to be undertaken with FHWA planning and research funds. Such approvals and authorizations should be based on final work programs or other documents that describe the work to be performed. The State DOT and its subrecipients also must obtain prior approval for budget and programmatic changes as specified in 49 CFR 18.30 or 49 CFR 19.25 and for those items of allowable costs which require approval in accordance with the cost principles specified in 49 CFR 18.22(b) applicable to the entity expending the funds.

(b) Authorization to proceed with the FHWA funded work in whole or in part is a contractual obligation of the Federal government pursuant to 23 U.S.C. 106 and requires that appropriate funds be available for the full Federal share of the cost of work authorized. Those State DOTs that do not have sufficient FHWA planning and research funds or obligation authority available to obligate the full Federal share of a work program or project may utilize the advance construction provisions of 23 U.S.C. 115(a) in accordance with the requirements of 23 CFR part 630, subpart G. The State DOTs that do not meet the advance construction provisions, or do not wish to utilize them, may request authorization to proceed with that portion of the work for which FHWA planning and research funds are available. In the latter case, authorization to proceed may be given for either selected work activities or for a portion of the program period, but such authorization does not constitute a commitment by the FHWA to fund the remaining portion of the work if additional funds do become available.

(c) A project agreement must be executed by the State DOT and the FHWA Division Office for each statewide transportation planning, metropolitan

planning area, or RD&T work program, individual activity or study, or any combination administered as a single Federal-aid project. The project agreement may be executed concurrent with or after authorization has been given by the FHWA Division Administrator to proceed with the work in whole or in part. In the event that the project agreement is executed for only part of the work, the project agreement must be amended when authorization is given to proceed with additional work.

(The information collection requirements in § 420.115(c) have been approved by the OMB and assigned control numbers 2125-0529)

**§ 420.117 What are the program monitoring and reporting requirements?**

(a) In accordance with 49 CFR 18.40, the State DOT shall monitor all activities performed by its staff or by sub-recipients with FHWA planning and research funds to assure that the work is being managed and performed satisfactorily and that time schedules are being met.

(b)(1) The State DOT must submit performance and expenditure reports, including a report from each sub-recipient, that contain as a minimum:

(i) Comparison of actual performance with established goals;

(ii) Progress in meeting schedules;

(iii) Status of expenditures in a format compatible with the work program, including a comparison of budgeted (approved) amounts and actual costs incurred;

(iv) Cost overruns or underruns;

(v) Approved work program revisions; and

(vi) Other pertinent supporting data.

(2) Additional information on reporting requirements for individual RD&T studies is contained in subpart B of this part.

(c) Reports required by paragraph (b) of this section shall be annual unless more frequent reporting is determined to be necessary by the FHWA Division Administrator. The FHWA may not require more frequent than quarterly reporting unless the criteria in 49 CFR 18.12 or 49 CFR 19.14 are met. Reports are due 90 days after the end of the reporting period for annual and final reports and no later than 30 days after

the end of the reporting period for other reports.

(d) Events that have significant impact on the work must be reported as soon as they become known. The types of events or conditions that require reporting include: problems, delays, or adverse conditions that will materially affect the ability to attain program objectives. This disclosure must be accompanied by a statement of the action taken, or contemplated, and any Federal assistance needed to resolve the situation.

(e) Suitable reports that document the results of activities performed with FHWA planning and research funds must be prepared by the State DOT or subrecipient and submitted for approval by the FHWA Division Administrator prior to publication. The FHWA Division Administrator may waive this requirement for prior approval. The FHWA's approval of reports constitutes acceptance of such reports as evidence of work performed but does not imply endorsement of a report's findings or recommendations. Reports prepared for FHWA-funded work must include appropriate credit references and disclaimer statements. (The information collection requirements in § 420.117 have been approved by the OMB and assigned control numbers 2125-0039 for States and 2132-0529 for MPOs.)

**§ 420.119 What are the fiscal requirements?**

(a) The maximum rate of Federal participation for FHWA planning and research funds shall be as prescribed in title 23, U.S.C., for the specific class of funds used (*i.e.*, SPR, PL, NHS, STP, or MG) except as specified in paragraph (d) of this section. The provisions of 49 CFR 18.24 or 49 CFR 19.23 are applicable to any necessary matching of FHWA planning and research funds.

(b) The value of third party in-kind contributions may be accepted as the match for FHWA planning and research funds, in accordance with the provisions of 49 CFR 18.24(a)(2) or 49 CFR 19.23(a) and may be on either a total planning work program basis or for specific line items or projects. The use of third party in-kind contributions must be identified in the original work program/scope of work and the grant/

subgrant agreement, or amendments thereto. The use of third-party in-kind contributions must be approved in advance by the FHWA Division Administrator and may not be made retroactive prior to approval of the work program/scope of work or an amendment thereto. The State DOT or subrecipient is responsible for ensuring that the following additional criteria are met:

(1) The third party performing the work agrees to allow the value of the work to be used as the match;

(2) The cost of the third party work is not paid for by other Federal funds or used as a match for other federally funded grants/subgrants;

(3) The work performed by the third party is an eligible transportation planning or RD&T related activity that benefits the federally funded work;

(4) The third party costs (*i.e.*, salaries, fringe benefits, etc.) are allowable under the applicable Office of Management and Budget (OMB) cost principles (*i.e.*, OMB Circular A-21, A-87, or A-122);<sup>1</sup>

(5) The third party work is performed during the period to which the matching requirement applies;

(6) The third party in-kind contributions are verifiable from the records of the State DOT or subrecipient and these records show how the value placed on third party in-kind contributions was derived; and

(7) If the total amount of third party expenditures at the end of the program period is not sufficient to match the total expenditure of Federal funds by the recipient/subrecipient, the recipient/subrecipient will need to make up any shortfall with its own funds.

(c) In accordance with the provisions of 23 U.S.C. 120(j), toll revenues that are generated and used by public, quasi-public, and private agencies to build, improve, or maintain highways, bridges, or tunnels that serve the public purpose of interstate commerce may be used as a credit for the non-Federal share of an FHWA planning and research funded project.

<sup>1</sup>OMB Circulars are available on the Internet at <http://www.whitehouse.gov/omb/circulars/index.html>.

(d) In accordance with 23 U.S.C. 505(e) or 23 U.S.C. 104(f)(3), the requirement for matching SPR or PL funds may be waived if the FHWA determines the interests of the Federal-aid highway program would be best served. Waiver of the matching requirement is intended to encourage State DOTs and/or MPOs to pool SPR and/or PL funds to address national or regional high priority planning or RD&T problems that would benefit multiple States and/or MPOs. Requests for waiver of matching requirements must be submitted to the FHWA headquarters office for approval by the Associate Administrator for Planning and Environment (for planning activities) or the Associate Administrator for Research, Development, and Technology (for RD&T activities). The matching requirement may not be waived for NHS, STP, or MG funds.

(e) NHS, STP, or MG funds used for eligible planning and RD&T purposes must be identified separately from SPR or PL funds in the work program(s) and must be administered and accounted for separately for fiscal purposes. In accordance with the statewide and metropolitan planning process requirements for fiscally constrained transportation improvement program (TIPs) planning or RD&T activities funded with NHS, STP, or MG funds must be included in the Statewide and/or metropolitan TIP(s) unless the State DOT and MPO (for a metropolitan area) agree that they may be excluded from the TIP.

(f) Payment shall be made in accordance with the provisions of 49 CFR 18.21 or 49 CFR 19.22.

**§ 420.121 What other requirements apply to the administration of FHWA planning and research funds?**

(a) *Audits.* Audits of the State DOTs and their subrecipients shall be performed in accordance with OMB Circular A-133, Audits of States, Local Governments, and Non-Profit Organizations.<sup>2</sup> Audits of for-profit contractors are to be performed in accordance with State DOT or subrecipient contract administration procedures.

<sup>2</sup>See footnote 1.

(b) *Copyrights.* The State DOTs and their subrecipients may copyright any books, publications, or other copyrightable materials developed in the course of the FHWA planning and research funded project. The FHWA reserves a royalty-free, nonexclusive and irrevocable right to reproduce, publish, or otherwise use, and to authorize others to use, the work for Government purposes.

(c) *Disadvantaged business enterprises.* The State DOTs must administer the transportation planning and RD&T program(s) consistent with their overall efforts to implement section 1001(b) of the Transportation Equity Act for the 21st Century (Pub. L. 105-178) and 49 CFR part 26 regarding disadvantaged business enterprises.

(d) *Drug free workplace.* In accordance with the provisions of 49 CFR part 29, subpart F, State DOTs must certify to the FHWA that they will provide a drug free workplace. This requirement may be satisfied through the annual certification for the Federal-aid highway program.

(e) *Equipment.* Acquisition, use, and disposition of equipment purchased with FHWA planning and research funds by the State DOTs must be in accordance with 49 CFR 18.32(b). Local government subrecipients of State DOTs must follow the procedures specified by the State DOT. Universities, hospitals, and other non-profit organizations must follow the procedures in 49 CFR 19.34.

(f) *Financial management systems.* The financial management systems of the State DOTs and their local government subrecipients must be in accordance with the provisions of 49 CFR 18.20(a). The financial management systems of universities, hospitals, and other non-profit organizations must be in accordance with 49 CFR 19.21.

(g) *Lobbying.* The provisions of 49 CFR part 20 regarding restrictions on influencing certain Federal activities are applicable to all tiers of recipients of FHWA planning and research funds.

(h) *Nondiscrimination.* The nondiscrimination provisions of 23 CFR parts 200 and 230 and 49 CFR part 21, with respect to Title VI of the Civil Rights Act of 1964 and the Civil Rights Restoration Act of 1987, apply to all

programs and activities of recipients, subrecipients, and contractors receiving FHWA planning and research funds whether or not those programs or activities are federally funded.

(i) *Patents.* The State DOTs and their subrecipients are subject to the provisions of 37 CFR part 401 governing patents and inventions and must include or cite the standard patent rights clause at 37 CFR 401.14, except for §401.14(g), in all subgrants or contracts. In addition, State DOTs and their subrecipients must include the following clause, suitably modified to identify the parties, in all subgrants or contracts, regardless of tier, for experimental, developmental or research work: "The subgrantee or contractor will retain all rights provided for the State in this clause, and the State will not, as part of the consideration for awarding the subgrant or contract, obtain rights in the subgrantee's or contractor's subject inventions."

(j) *Procurement.* Procedures for the procurement of property and services with FHWA planning and research funds by the State DOTs must be in accordance with 49 CFR 18.36(a) and (i) and, if applicable, 18.36(t). Local government subrecipients of State DOTs must follow the procedures specified by the State DOT. Universities, hospitals, and other non-profit organizations must follow the procedures in 49 CFR 19.40 through 19.48. The State DOTs and their subrecipients must not use FHWA funds for procurements from persons (as defined in 49 CFR 29.105) who have been debarred or suspended in accordance with the provisions of 49 CFR part 29, subparts A through E.

(k) *Program income.* Program income, as defined in 49 CFR 18.25(b) or 49 CFR 19.24, must be shown and deducted from total expenditures to determine the Federal share to be reimbursed, unless the FHWA Division Administrator has given prior approval to use the program income to perform additional eligible work or as the non-Federal match.

(l) *Record retention.* Recordkeeping and retention requirements must be in accordance with 49 CFR 18.42 or 49 CFR 19.53.

(m) *Subgrants to local governments.* The State DOTs and subrecipients are

## § 420.201

responsible for administering FHWA planning and research funds passed through to MPOs and local governments, for ensuring that such funds are expended for eligible activities, and for ensuring that the funds are administered in accordance with this part, 49 CFR part 18, Uniform Administrative Requirements for Grants and Agreements to State and Local Governments, and applicable OMB cost principles. The State DOTs shall follow State laws and procedures when awarding and administering subgrants to MPOs and local governments and must ensure that the requirements of 49 CFR 18.37(a) have been satisfied.

(n) *Subgrants to universities, hospitals, and other non-profit organizations.* The State DOTs and subrecipients are responsible for ensuring that FHWA planning and research funds passed through to universities, hospitals, and other non-profit organizations are expended for eligible activities and for ensuring that the funds are administered in accordance with this part, 49 CFR part 19, Uniform Administrative Requirements for Grants and Agreements with Institutions of Higher Education, Hospitals, and Other Non-Profit Organizations, and applicable OMB cost principles.

(o) *Suspension and debarment.* (1) The State DOTs and their subrecipients shall not award grants or cooperative agreements to entities who are debarred or suspended, or otherwise excluded from or ineligible for participation in Federal assistance programs under Executive Order 12549 of February 18, 1986 (3 CFR, 1986 Comp., p. 189); and

(2) The State DOTs and their subrecipients shall comply with the provisions of 49 CFR part 29, subparts A through E, for procurements from persons (as defined in 49 CFR 29.105) who have been debarred or suspended.

(p) *Supplies.* Acquisition and disposition of supplies acquired by the State DOTs and their subrecipients with FHWA planning and research funds must be in accordance with 49 CFR 18.33 or 49 CFR 19.35.

## 23 CFR Ch. I (4–1–21 Edition)

### Subpart B—Research, Development and Technology Transfer Program Management

#### § 420.201 What is the purpose of this subpart?

The purpose of this subpart is to prescribe requirements for research, development, and technology transfer (RD&T) activities, programs, and studies undertaken by State DOTs and their subrecipients with FHWA planning and research funds.

#### § 420.203 How does the FHWA define the terms used in this subpart?

Unless otherwise specified in this part, the definitions in 23 U.S.C. 101(a) and subpart A of this part, are applicable to this subpart. As used in this subpart:

*Applied research* means the study of phenomena to gain knowledge or understanding necessary for determining the means by which a recognized need may be met; the primary purpose of this kind of research is to answer a question or solve a problem.

*Basic research* means the study of phenomena, and of observable facts, without specific applications towards processes or products in mind; the primary purpose of this kind of research is to increase knowledge.

*Development* means the systematic use of the knowledge or understanding gained from research, directed toward the production of useful materials, devices, systems or methods, including design and development of prototypes and processes.

*Final report* means a report documenting a completed RD&T study or activity.

*Intermodal RD&T* means research, development, and technology transfer activities involving more than one mode of transportation, including transfer facilities between modes.

*Peer exchange* means a periodic review of a State DOT's RD&T program, or portion thereof, by representatives of other State DOT's, for the purpose of exchange of information or best practices. The State DOT may also invite the participation of the FHWA, and other Federal, State, regional or local

transportation agencies, the Transportation Research Board, academic institutions, foundations or private firms that support transportation research, development or technology transfer activities.

*RD&T activity* means a basic or applied research project or study, development or technology transfer activity.

*Research* means a systematic study directed toward fuller scientific knowledge or understanding of the subject studied. Research can be basic or applied.

*Technology transfer* means those activities that lead to the adoption of a new technique or product by users and involves dissemination, demonstration, training, and other activities that lead to eventual innovation.

*Transportation Research Information Services (TRIS)* means the database produced and maintained by the Transportation Research Board and available online through the National Transportation Library. TRIS includes bibliographic records and abstracts of ongoing and completed RD&T activities. TRIS Online also includes links to the full text of public-domain documents.

**§ 420.205 What is the FHWA's policy for research, development, and technology transfer funding?**

(a) It is the FHWA's policy to administer the RD&T program activities utilizing FHWA planning and research funds consistent with the policy specified in § 420.105 and the following general principles in paragraphs (b) through (g) of this section.

(b) The State DOTs must provide information necessary for peer exchanges.

(c) The State DOTs are encouraged to develop, establish, and implement an RD&T program, funded with Federal and State DOT resources that anticipates and addresses transportation concerns before they become critical problems. Further, the State DOTs are encouraged to include in this program development and technology transfer programs to share the results of their own research efforts and promote the use of new technology.

(d) To promote effective use of available resources, the State DOTs are en-

couraged to cooperate with other State DOTs, the FHWA, and other appropriate agencies to achieve RD&T objectives established at the national level and to develop a technology transfer program to promote and use those results. This includes contributing to cooperative RD&T programs such as the NCHRP, the TRB, and transportation pooled fund studies as a means of addressing national and regional issues and as a means of leveraging funds.

(e) The State DOTs will be allowed the authority and flexibility to manage and direct their RD&T activities as presented in their work programs, and to initiate RD&T activities supported by FHWA planning and research funds, subject to the limitation of Federal funds and to compliance with program conditions set forth in subpart A of this part and § 420.207.

(f) The State DOTs will have primary responsibility for managing RD&T activities supported with FHWA planning and research funds carried out by other State agencies and organizations and for ensuring that such funds are expended for purposes consistent with this subpart.

(g) Each State DOT must develop, establish, and implement a management process that ensures effective use of available FHWA planning and research funds for RD&T activities on a statewide basis. Each State DOT is permitted to tailor its management process to meet State or local needs; however, the process must comply with the minimum requirements and conditions of this subpart.

(h) The State DOTs are encouraged to make effective use of the FHWA Division, Resource Center, and Headquarters office expertise in developing and carrying out their RD&T activities. Participation of the FHWA on advisory panels and in program exchange meetings is encouraged.

**§ 420.207 What are the requirements for research, development, and technology transfer work programs?**

(a) The State DOT's RD&T work program must, as a minimum, consist of a description of RD&T activities to be accomplished during the program period, estimated costs for each eligible

activity, and a description of any cooperative activities including the State DOT's participation in any transportation pooled fund studies and the NCHRP. The State DOT's work program should include a list of the major items with a cost estimate for each item. The work program should also include any study funded under a previous work program until a final report has been completed for the study.

(b) The State DOT's RD&T work program must include financial summaries showing the funding levels and share (Federal, State, and other sources) for RD&T activities for the program year. State DOTs are encouraged to include any activity funded 100 percent with State or other funds for information purposes.

(c) Approval and authorization procedures in § 420.115 are applicable to the State DOT's RD&T work program.

**§ 420.209 What are the conditions for approval?**

(a) As a condition for approval of FHWA planning and research funds for RD&T activities, a State DOT must develop, establish, and implement a management process that identifies and results in implementation of RD&T activities expected to address high priority transportation issues. The management process must include:

(1) An interactive process for identification and prioritization of RD&T activities for inclusion in an RD&T work program;

(2) Use of all FHWA planning and research funds set aside for RD&T activities, either internally or for participation in transportation pooled fund studies or other cooperative RD&T programs, to the maximum extent possible;

(3) Procedures for tracking program activities, schedules, accomplishments, and fiscal commitments;

(4) Support and use of the TRIS database for program development, reporting of active RD&T activities, and input of the final report information;

(5) Procedures to determine the effectiveness of the State DOT's management process in implementing the RD&T program, to determine the utilization of the State DOT's RD&T outputs, and to facilitate peer exchanges

of its RD&T Program on a periodic basis;

(6) Procedures for documenting RD&T activities through the preparation of final reports. As a minimum, the documentation must include the data collected, analyses performed, conclusions, and recommendations. The State DOT must actively implement appropriate research findings and should document benefits; and

(7) Participation in peer exchanges of its RD&T management process and of other State DOTs' programs on a periodic basis. To assist peer exchange teams in conducting an effective exchange, the State DOT must provide to them the information and documentation required to be collected and maintained under this subpart. Travel and other costs associated with the State DOT's peer exchange may be identified as a line item in the State DOT's work program and will be eligible for 100 percent Federal funding. The peer exchange team must prepare a written report of the exchange.

(b) Documentation that describes the State DOT's management process and the procedures for selecting and implementing RD&T activities must be developed by the State DOT and submitted to the FHWA Division office for approval. Significant changes in the management process also must be submitted by the State DOT to the FHWA for approval. The State DOT must make the documentation available, as necessary, to facilitate peer exchanges.

(c) The State DOT must include a certification that it is in full compliance with the requirements of this subpart in each RD&T work program. If the State DOT is unable to certify full compliance, the FHWA Division Administrator may grant conditional approval of the State DOT's work program. A conditional approval must cite those areas of the State DOT's management process that are deficient and require that the deficiencies be corrected within 6 months of conditional approval. The certification must consist of a statement signed by the Administrator, or an official designated by the Administrator, of the State DOT certifying as follows: "I (name of certifying official), (position title), of the State (Commonwealth) of \_\_\_\_\_, do hereby

certify that the State (Commonwealth) is in compliance with all requirements of 23 U.S.C. 505 and its implementing regulations with respect to the research, development, and technology transfer program, and contemplate no changes in statutes, regulations, or administrative procedures which would affect such compliance.”

(d) The FHWA Division Administrator shall periodically review the State DOT’s management process to determine if the State is in compliance with the requirements of this subpart. If the Division Administrator determines that a State DOT is not complying with the requirements of this subpart, or is not performing in accordance with its RD&T management process, the FHWA Division Administrator shall issue a written notice of proposed determination of noncompliance to the State DOT. The notice will set forth the reasons for the proposed determination and inform the State DOT that it may reply in writing within 30 calendar days from the date of the notice. The State DOT’s reply should address the deficiencies cited in the notice and provide documentation as necessary. If the State DOT and the Division Administrator cannot resolve the differences set forth in the determination of nonconformity, the State DOT may appeal to the Federal Highway Administrator whose action shall constitute the final decision of the FHWA. An adverse decision shall result in immediate withdrawal of approval of FHWA planning and research funds for the State DOT’s RD&T activities until the State DOT is in full compliance.

(The information collection requirements in § 420.209 have been approved by the OMB and assigned control number 2125-0039)

## **PART 450—PLANNING ASSISTANCE AND STANDARDS**

### **Subpart A—Transportation Planning and Programming Definitions**

- Sec.  
450.100 Purpose.  
450.102 Applicability.

- 450.104 Definitions.

### **Subpart B—Statewide and Nonmetropolitan Transportation Planning and Programming**

- 450.200 Purpose.  
450.202 Applicability.  
450.204 Definitions.  
450.206 Scope of the statewide and non-metropolitan transportation planning process.  
450.208 Coordination of planning process activities.  
450.210 Interested parties, public involvement, and consultation.  
450.212 Transportation planning studies and project development.  
450.214 Development of programmatic mitigation plans.  
450.216 Development and content of the long-range statewide transportation plan.  
450.218 Development and content of the statewide transportation improvement program (STIP).  
450.220 Self-certifications, Federal findings, and Federal approvals.  
450.222 Project selection from the STIP.  
450.224 Applicability of NEPA to statewide transportation plans and programs.  
450.226 Phase-in of new requirements.

### **Subpart C—Metropolitan Transportation Planning and Programming**

- 450.300 Purpose.  
450.302 Applicability.  
450.304 Definitions.  
450.306 Scope of the metropolitan transportation planning process.  
450.308 Funding for transportation planning and unified planning work programs.  
450.310 Metropolitan planning organization designation and redesignation.  
450.312 Metropolitan Planning Area boundaries.  
450.314 Metropolitan planning agreements.  
450.316 Interested parties, participation, and consultation.  
450.318 Transportation planning studies and project development.  
450.320 Development of programmatic mitigation plans.  
450.322 Congestion management process in transportation management areas.  
450.324 Development and content of the metropolitan transportation plan.  
450.326 Development and content of the transportation improvement program (TIP).  
450.328 TIP revisions and relationship to the STIP.  
450.330 TIP action by the FHWA and the FTA.  
450.332 Project selection from the TIP.  
450.334 Annual listing of obligated projects.